

EXAMINER'S ANSWER



**UNITED STATES DEPARTMENT OF  
COMMERCE**

**Patent and Trademark Office  
ASSISTANT SECRETARY AND  
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TRADEMARKS**

Washington, D.C. 20231

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 15

Serial Number: 08/641,233  
Filing Date: April 30, 1996  
Appellant(s): Cozar et al.

Richard L. Treanor  
For Appellant

1998 / 1998

1998 / 1998

**EXAMINER'S ANSWER**

This is in response to appellant's brief on appeal filed October 8, 1997.

**(1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

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**(3) Status of Claims**

The statement of the status of the claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

The amendment after final rejection filed on July 3, 1997, has been entered.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

The brief includes a statement that claims 1-8 and 12-13 do not stand or

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

Number	Name	Date
04224631	NIPPON MINING CO (Japan)	08-1992
04221021	NIPPON MINING CO (Japan)	08-1992
5,234,512	INOUE ET AL.	08-1993

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5,236,522	FUKUDA ET AL.	08-1993
4,832,908	ISHIKAWA ET AL.	05-1989
5,164,021	KATO ET AL.	11-1992

**(10) New Prior Art**

No new prior art has been applied in this examiner's answer.

**(11) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-6 and 9 are rejected under 35 U.S.C. § 103 as being unpatentable over JP04-224631 or JP04-221021.

The references teach the features of Fe-Ni-Co alloys having constituents whose proportions overlap those as recited in the instant claims. The features relied upon

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described above can be found in the references at the respective abstracts. The difference between the references and the claims are as follows: The cited references do not disclose the claimed equations expressing the chemical composition of the alloy. However, it is well settled that there is no invention in the discovery of a general equation if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. *In re Austin, et al.*, 149 USPQ 685, 688. Therefore, the subject matter as a whole would have been obvious to one having ordinary skill in the metallurgical art at the time the invention was made to have selected the overlapping portion of the subject matter disclosed by the reference because overlapping subject matters have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549. The cited references may not explicitly disclose the proportions of the Ca and Mg elements, however, the total proportion of optional alloying elements including the Ca and Mg elements with other alloying elements has been taught by the references. Thus, selecting a value in a known range by optimization for the best results is within ordinary skill artisan, see *In re Aller, et al.*, 105 U.S.P.Q. 233.

With respect to the amount of elements as recited in the instant claims 4-6

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which reads on zero or said elements read on inevitable impurities as recited in the claims. Thus, the limitations based on said elements has been met by the cited references for the reasons as set forth above.

Claims 1-8 and 12-13 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5234512 to Inoue et al in view of USP 5236522 to Fukuda et al or USP 4832908 to Ishikawa et al or USP 5164021 to Kato et al.

The Inoue et al reference discloses the features substantially as claimed. The disclosed features include Fe-Ni shadow mask (abstract) and the conventional shadow mask processing steps such as etching and working (column 1, lines 47-57). The difference between the Inoue et al reference and the claims are as follows: The Fe-Ni alloy of Inoue et al does not contain Co element and Inoue et al do not disclose the claimed equations expressing the chemical composition of the alloy. However, it is well settled that there is no invention in the discovery of a general equation if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. *In re Austin, et al.*, 149 USPQ 685, 688.

With respect to the Co content, Fukuda et al (col. 2, lines 51-57), Kato et al

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(col. 2, lines 46-50), and Ishikawa et al (col. 3, lines 24-30) teaches the benefit of adding Co to Fe-Ni shadow mask materials in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to provide Fe-Ni alloy with Co element as taught by Fukuda et al (col. 2, lines 51-57), Kato et al (col. 2, lines 46-50), and Ishikawa et al (col. 3, lines 24-30) in order to improve the etching adaptability of the Fe-Ni shadow mask material. It has been held that combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of skilled artisan and is not a patentable subject matter. In re Castner, 186 USPQ 213 (217).

With respect to the etching step in the Inoue et al reference which is known in the art meant for drilling. See MPEP § 706.02(a); In re Malcolm, 1942 C.D. 589; 543 O.G. 440.

With respect to the claimed martensitic transformation starting point and the thermal expansion coefficient as recited in claims 9-11 that although the cited references do not disclose the claimed material properties; however, those properties as claimed would have been inherently possessed by the alloys of cited references because the claimed alloy composition is overlapped by the cited references. It is well settled that a newly discovered property does not necessarily mean the product is

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unobvious, since the property may be inherent in the prior art. See *In re Best*, 195 USPQ 430, 433 (CCPA 1977), *In re Swinehart*, 169 USPQ 226 (CCPA 1971), and *In re Skoner, et al.*, 186 USPQ 80. Similar process can reasonably be expected to yield products which inherently possess the same properties. *In re Spada*, 15 USPQ 2d 1655 (CAFC 1990), *In re DeBlauwe*, 222 USPQ 191, and *In re Wiegand*, 86 USPQ 155 (CCPA 1950). The mere failure of the cited references to disclose all the advantages asserted by applicants is not substitute for actual differences in properties; see *In re DeBlauwe*, 222 USPQ 191, *In re Best*, 195 USPQ 430, and *In re Swinehart*, 169 USP 226. An apparently old composition cannot be converted into an unobvious one simply by the discovery of a characteristic that one cannot glean from the cited references; see *Titanium Metals Corp. Vs. Banner*, 227 USPQ 773, *In re King et al*, 43 USPQ 400, and *In re James*, 29 USPQ 431. Accordingly, the burden of proof is upon applicants to show that the instant claimed subject matter is different from and unobvious over that taught by the cited references; see *In re Fessmann*, 180 USPQ 324, *In re Best*, 195 USPQ 430 (CCPA 1977), *Ex parte Gray*, 10 USPQ 2d 1922, 1925 (BPAI 1989), and *In re Brown*, 173 USPQ 685.

**(12) New Ground of Rejection**

This examiner's answer does not contain any new ground of rejection.

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**(13) Response to argument**

Appellant's arguments filed October 8, 1997, have been fully considered but they are not persuasive.

Appellants argue that the cited JP04224631 and JP04221021 references do not disclose the claimed alloy composition. However, appellants did not point out which alloying element and its proportion has not been disclosed.

Appellants argue that the cited JP04224631 and JP04221021 references very broadly describe iron-nickel-cobalt alloys. However, with respect to the instant appealed claims which recite a transitional expression "comprises" which is inclusive and fails to exclude unrecited ingredients even in major amounts. See *Ex parte Davis et al.* (POBA 1948) 80 USPQ 448 and *In re Bertsch* 132 F2d 1014, 56 USPQ 379 (CCPA 1942).

Appellants argue that the cited JP04224631 and JP04221021 references do not disclose the claimed relationships between nickel and cobalt. However, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. *In re Austin, et al* 149 USPQ 685, 688.

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Appellants argue that the claimed formulae are critical to the claimed properties. However, appellants have not presented any factual experimental data showing the claimed formulae are critical and would produce unexpected results. Due to the absence of tests comparing instant invention with those of the closest prior art, appellants' assertions of unexpected results constitute mere an argument. In re DeBlauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).

Appellants argue that the cited references fail to disclose the claimed alloy properties which evidence the claimed invention is non-obvious. However, the mere failure of the cited references to disclose all the advantages asserted by appellants is not substitute for actual differences in properties; see In re DeBlauwe, 222 USPQ 191, In re Best, 195 USPQ 430, and In re Swinehart, 169 USP 226. An apparently old composition cannot be converted into an unobvious one simply by the discovery of a characteristic that one cannot glean from the cited references; see Titanium Metals Corp. Vs. Banner, 227 USPQ 773, In re King et al, 43 USPQ 400, and In re James, 29 USPQ 431. Accordingly, the burden of proof is upon appellants to show that the instant claimed subject matter is different from and unobvious over that taught by the cited references; see In re Fessmann, 180 USPQ 324, In re Best, 195 USPQ 430 (CCPA 1977), Ex parte Gray, 10 USPQ 2d 1922, 1925 (BPAI 1989), and In re Brown, 173 USPQ 685.

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Appellants argue that the attached experimental data shows the importance of the claimed formulae. However, the attached experimental data has not accompanied with a declaration. Moreover, appellants have not pointed out and explained the alleged critical features from the attached experimental data. The objective evidence of nonobviousness must be commensurate in scope with claims that evidence is offered to support in order to establish unexpected results for the claimed invention. In re Clemens, Hurwitz, and Walker, 206 USPQ 289, 206. The showing of unexpected results must be occurred over the entire claimed range. In re Clemens, 622 F.2d 1029, 206 USPQ 289, 296 (CCPA 1980).

Furthermore, the figure showing a thermal expansion coefficient between 20° and 100° shows the claimed thermal expansion can be obtained outside the claimed Ni range such as from 30 to 31.5 wt% Ni.

The figure showing a thermal expansion coefficient between 80° and 130° shows the claimed thermal expansion can be obtained outside the claimed Ni range such as from 30 to 31.5 wt% Ni.

The figure showing a Ms transformation starting point also shows the claimed less than -50°C can be obtained outside the claimed Ni range such as at 31.25 wt% Ni and 6 wt% Co.

Appellants argue that the Inoue reference does not disclose Co element. However, appellant's arguments against the

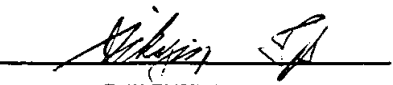
references individually, one cannot show non obviousness b

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attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Moreover, combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of skilled artisan and is not a patentable subject matter. *In re Castner*, 186 USPQ 213 (217).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
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SIKYIN IP  
PRIMARY EXAMINER  
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S. Ip  
January 4, 1998

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